

Application No.: 10/586,299

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Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (Withdrawn): A rolling bearing including a race and a rolling element, at least one member of said race and said rolling element having a nitrogen-enriched layer in its surface layer, a surface layer portion containing austenite crystal grains having a grain size number of at least 11, and a steel forming the member having a position exhibiting HRC50 in a hardenability test (JISG0561) apart from a quenched end by a distance of at least 12.7 mm (8/16 inch).

2 (Withdrawn): A rolling bearing including a race and a rolling element, at least one member of said race and said rolling element being formed of a steel containing 0.8-1.5 wt% of carbon, 0.4-1.2 wt% of Si, 0.8-1.5 wt% of Mn, and 0.5-1.8 wt% of Cr, and having a nitrogen-enriched layer in its surface layer, and a surface layer portion containing austenite crystal grains having a grain size number of at least 11.

3 (Withdrawn): The rolling bearing according to claim 2, wherein a concentration of nitrogen of said surface layer is 0.05-0.7wt%.

4 (Withdrawn): The rolling bearing according to claim 2, wherein a value of specific surface area represented as (a surface area/ a volume) of said at least one member is not more than 0.6.

5 (Currently Amended): A heat treatment method for steel, comprising the steps of: carbonitriding or nitriding at 810-950°C a part formed of a steel containing 0.8-1.5 wt% of carbon, 0.4-1.2 wt% of Si, 0.8-1.5 wt% of Mn, and 0.5-1.8 wt% of Cr, the steel having a

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position exhibiting HRC50 in a hardenability test (JISG0561) apart from a quenched end by at least 12.7 mm;

subsequently cooling the part to a temperature range lower than a transformation point A1 of said steel to provide a quenched part;

tempering the quenched part a first time; [[and]]

subsequently heating the part again after tempering to a quenching temperature range not lower than the transformation point A1 and lower than a temperature used for said carbonitriding or nitriding, to quench the part a second time, and

tempering the part a second time after quenching a second time.

6 (Original): The heat treatment method for steel according to claim 5, wherein the quenching temperature range not lower than said transformation point A1 and lower than the temperature used for said carbonitriding or nitriding is 750-810°C.

7 (New): The heat treatment method for steel according to claim 5, wherein the temperature used for tempering the quenched part a first time is 180°C.

8 (New): The heat treatment method for steel according to claim 5, wherein the temperature used for tempering the part a second time is 180°C.